FIG.1

10

70 INTERACTION MAGNITUDE CALCULATING UNIT	80 EXPRESSION MODE STORING UNIT

20 INPUT UNIT	90 EXPRESSION CONTROLLER	40 IMAGE OUTPUT UNIT

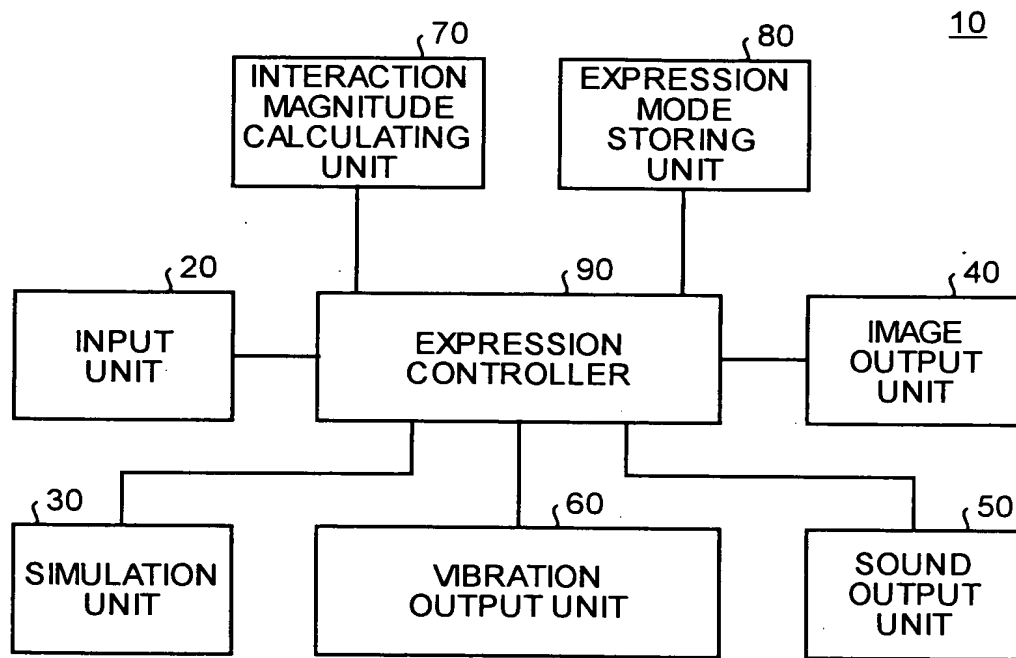| 30 SIMULATION UNIT	60 VIBRATION OUTPUT UNIT	50 SOUND OUTPUT UNIT

FIG.2A

PRE-COLLISION AND POST-REBOUND INTERACTION MAGNITUDE AND EXPRESSION MODE

INTERACTION MAGNITUDE	EXPRESSION MODES	
	COLOR OF COLLIDER ENTITY	COLOR OF COLLIDER ENTITY
1.5mm < SHORTEST DISTANCE	PURPLE	YELLOW
1.0mm < SHORTEST DISTANCE ≦ 1.5mm	BLUE	YELLOW
0.5mm < SHORTEST DISTANCE ≦ 1.0mm	GREEN	YELLOW
0 < SHORTEST DISTANCE ≦ 0.5mm	YELLOW-GREEN	YELLOW
SHORTEST DISTANCE = 0.0mm	YELLOW	YELLOW

FIG.2B

INTERACTION MAGNITUDE AND EXPRESSION MODE DURING COLLISION

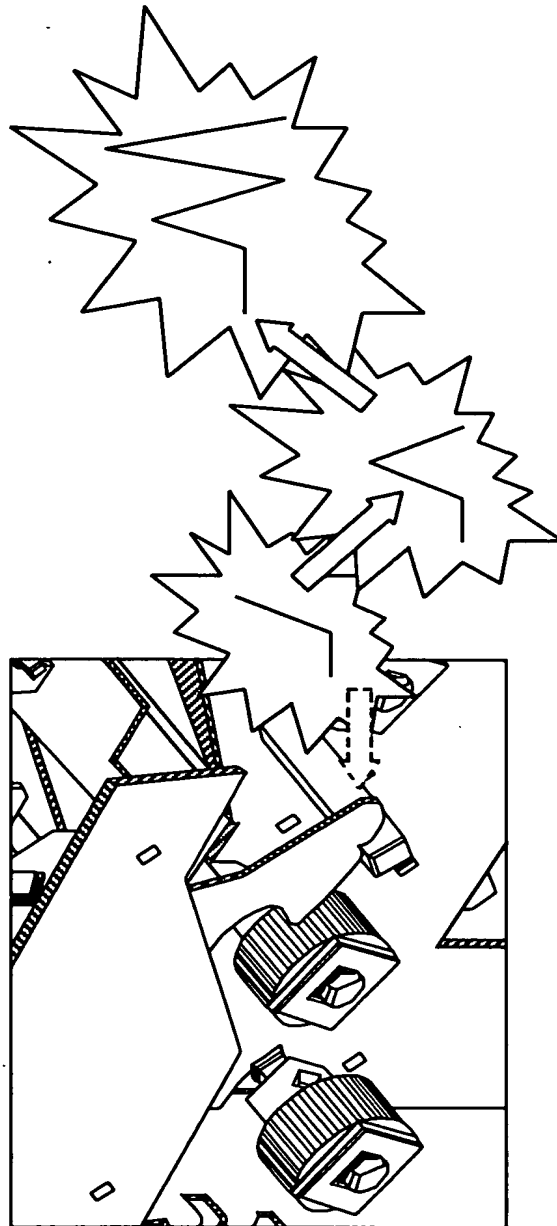| INTERACTION MAGNITUDE	EXPRESSION MODES				
	IMPACT WAVEFORM	ANIMATION	COLOR	IMPACT SOUND	VIBRATION
SMALL DENTING AMOUNT	SINGLE SINUSOIDAL WAVE	SMALL AMPLITUDE SINUSOIDAL WAVE	YELLOW	LOW SOUND	FEEBLE VIBRATIONS
MEDIUM DENTING AMOUNT	HALF-SINE WAVE	MEDIUM AMPLITUDE SINUSOIDAL WAVE	ORANGE	MEDIUM SOUND	MEDIUM VIBRATIONS
LARGE DENTING AMOUNT	OBLONG WAVE	LARGE AMPLITUDE SINUSOIDAL WAVE	RED	HIGH SOUND	HIGH VIBRATIONS

FIG.3
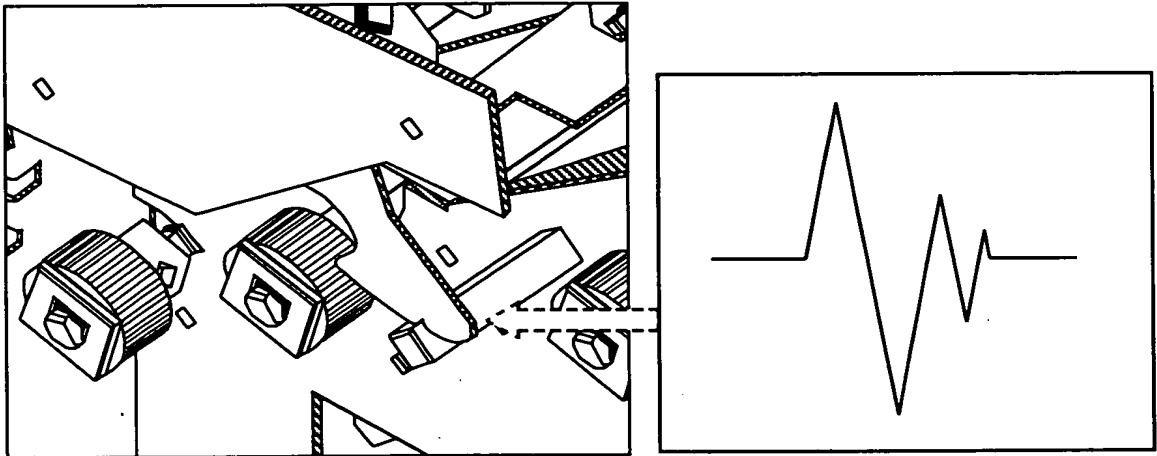
FIG.4

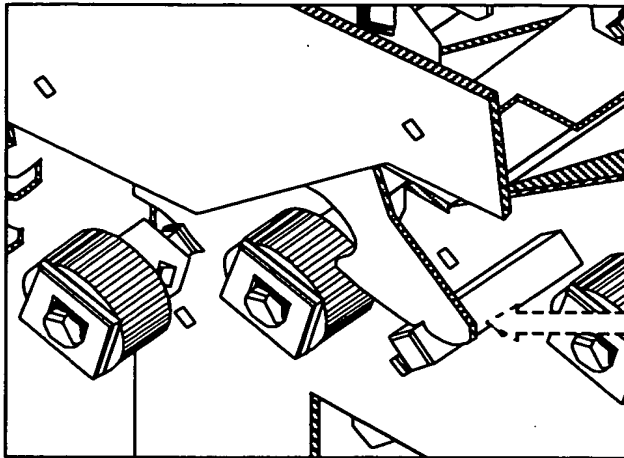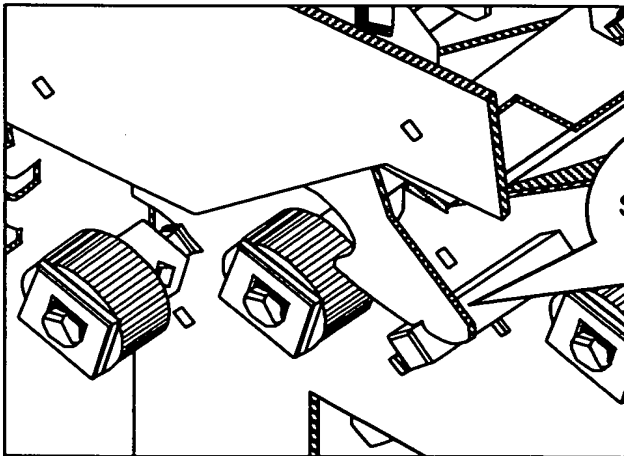# FIG.5

COLOR CHANGES FROM
YELLOW TO ORANGE TO RED

FIG.6
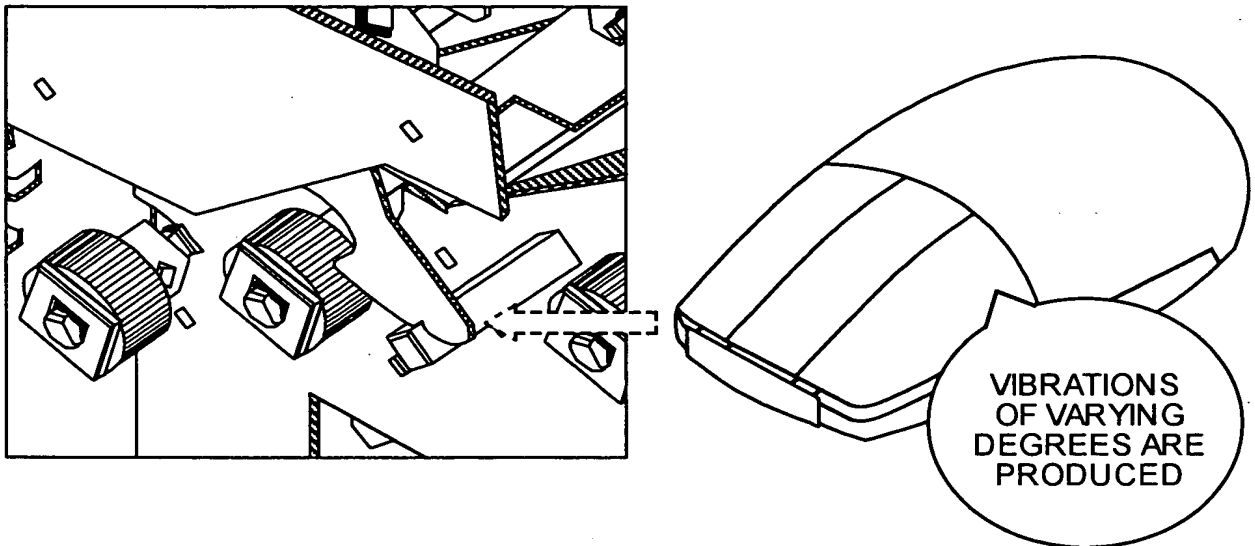

SOUND OF COLLISION
IS PRODUCED

FIG.7
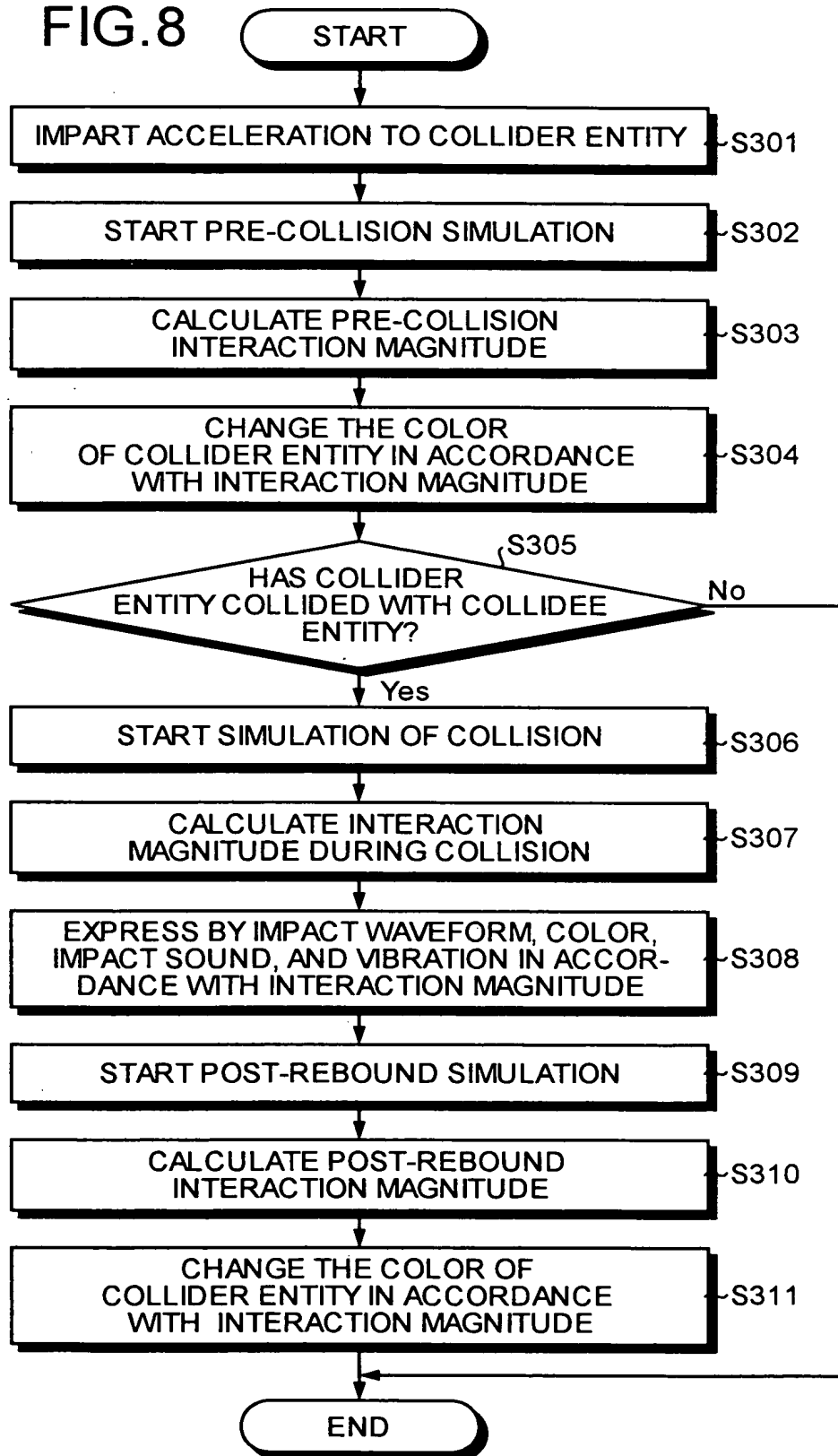

VIBRATIONS
OF VARYING
DEGREES ARE
PRODUCED

FIG.8

(START)

↓

| IMPART ACCELERATION TO COLLIDER ENTITY | S301 |

↓

| START PRE-COLLISION SIMULATION | S302 |

↓

| CALCULATE PRE-COLLISION INTERACTION MAGNITUDE | S303 |

↓

| CHANGE THE COLOR OF COLLIDER ENTITY IN ACCORDANCE WITH INTERACTION MAGNITUDE | S304 |

↓

S305
HAS COLLIDER ENTITY COLLIDED WITH COLLIDEE ENTITY? — No →

↓ Yes

| START SIMULATION OF COLLISION | S306 |

↓

| CALCULATE INTERACTION MAGNITUDE DURING COLLISION | S307 |

↓

| EXPRESS BY IMPACT WAVEFORM, COLOR, IMPACT SOUND, AND VIBRATION IN ACCORDANCE WITH INTERACTION MAGNITUDE | S308 |

↓

| START POST-REBOUND SIMULATION | S309 |

↓

| CALCULATE POST-REBOUND INTERACTION MAGNITUDE | S310 |

↓

| CHANGE THE COLOR OF COLLIDER ENTITY IN ACCORDANCE WITH INTERACTION MAGNITUDE | S311 |

↓

(END)

FIG.9

PUBLIC CIRCUIT

107

100

102

102a

101

105

103

104

108

109

LAN/WAN

106

PC 111

SERVER 112

PRINTER 113

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FIG.10